

# Work Order ID 59392

Thursday, June 03, 2010 11:23:30 AM



Page 1

Item ID: D315-668-011

Accept



Setup Start



Revision ID:

Item Name: Skidtube LH

Stop



Start Date: 6/3/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 6/14/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan: *RL*

Date: *10-03*

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool # Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2904

Rev B

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPPD315-668-011

CHG 001

*Swalato*

*Jeff BG 10/07/28*

*B59392*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 59392**

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Item ID: D315-668-011

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Cust Item ID:

Required Date: 6/14/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Stop



Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

110



Skidtubes

Skidtubes

Skidtubes

Memo

LANDING GEAR RESOURCE 1

1-Cut D2904b to length as per dwg D2904

2-Drill aft and fwd cap holes as per dwg D2904 using DT8025 jig  
(DO NOT OPEN TO FINISH SIZE)3-Drill saddle holes (6 Deg) as per Dwg D2904 using DT8938A jig  
(ENSURE THAT LOCATOR RING IS SET FOR LH TUBE)4-Drill GHW holes (3 Deg) as per Dwg D2904 using DT8938B jig  
(ENSURE THAT LOCATOR RING IS SET FOR LH TUBE)5-Insert and cleco doublers and DT8938d in position. Transfer all 256 holes thru  
tube and doublers.

6-Remove doublers and identify batch# and orientation

7-C'sink Rivet holes 256 places as per Dwg D2904 and deburr

8-Locate from saddle holes, drill wearplate holes using DT8994. Jig must be 1.7"  
from aft end of tube (REF)9-Remove fwd and aft indexing ridges as per dwg D2904. Open fwd and aft cap  
holes to finish size, scribe batch# at aft end of tube.

10-Remove marks left from drill jig and deburr

11/10/6/8

10-6-9

10-7-12

11/10/6/10

10-7-12

9629

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Item ID: D315-668-011

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Revision ID:

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Start Date: 6/3/2010 Start Qty: 1.00

Required Date: 6/14/2010 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

130

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

140

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control



8 10/07/12

DP

10-7-12

XL

1 in 10/7/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Date: 6/3/2010 Start Qty: 1.00



Required Date: 6/14/2010 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150



Skidtubes

Skidtubes

0.00

Memo

0.00

LANDING GEAR RESOURCE 1

1-Remove alodine around X-Bolt holes on doublers

2-Rivet doublers as per Dwg D2904.(DO NOT INSTALL RIVETS AROUND X-BOLT HOLES AT THIS TIME)

3-Open X-Bolt spacer holes to finish size as per dwg D2904.(DO NOT USE CUTTING FLUID)

4-C'sink and deburr X-Bolt spacer holes, prepare for Welding.

5-Blow all chips from inside tube

6-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch  
A/R ☐ Sikaflex-291 ☐ #113119 ☐

Sikaflex expire date: 10-11-30

Start Time: 11 AM Date: 10-7-13

Fin Time: 11 AM Date: 10-7-14

DD  
10-7-13

PTC

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

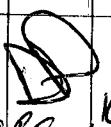


**NOTE:** Date & initial all entries



Dart Aerospace Ltd

W/O: 59392

# WORK ORDER CHANGES

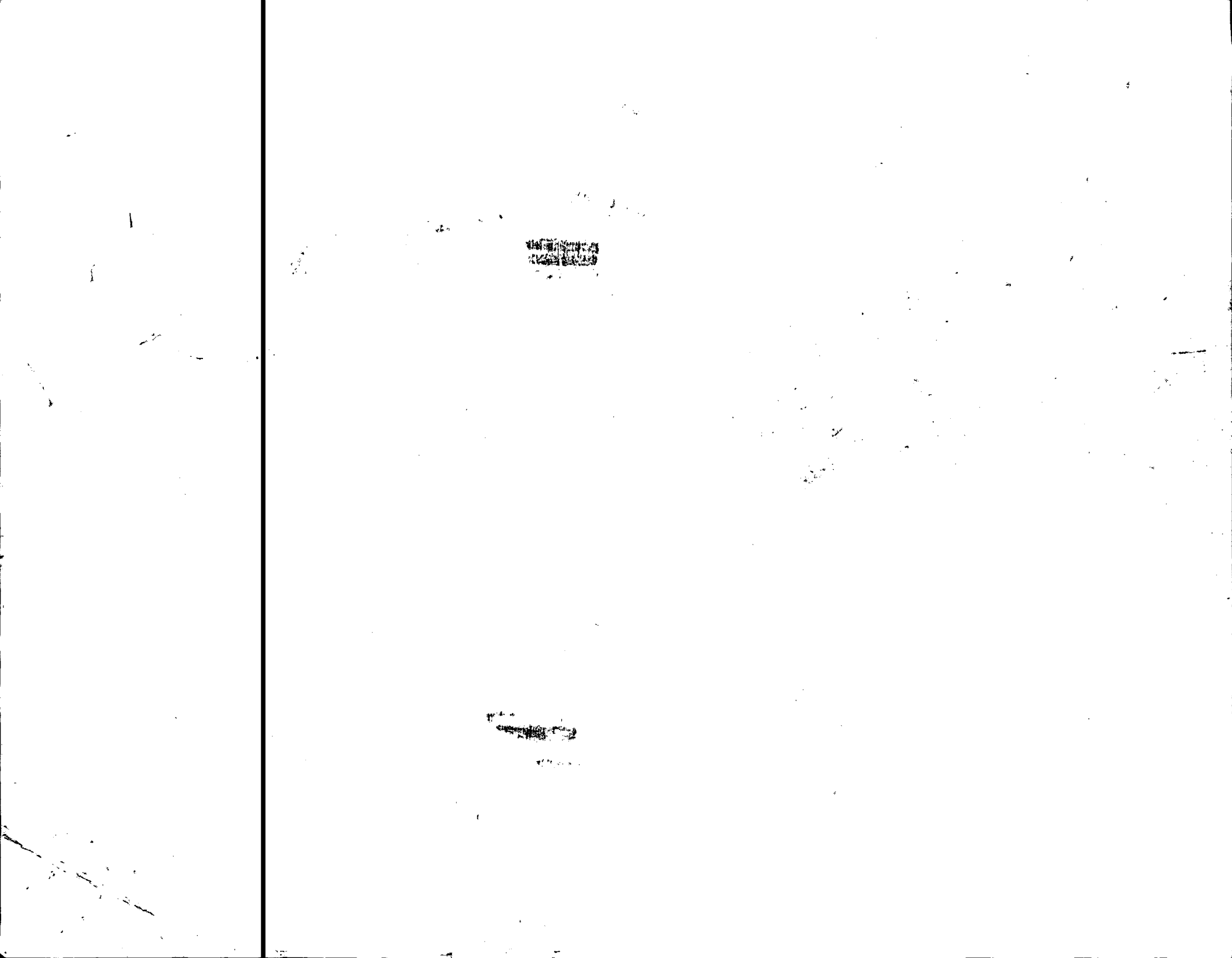
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10.06.09	110	USE CR3212-403 RIVETS B/N M114450 (168) INSTEAD OF MS20601AD463 M114859 (88) FSHERR = 240 <sup>16</sup> FOR MS20601 FSHERR = 664 <sup>16</sup> FOR CR3212		10-7-12 10/07/19		 10.06.09 10/07/19	 10/07/19

Part No: D315-668-011 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/06/09	110							

NOTE: Date & initial all entries



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Accept

Revision ID:

Item Name: Skidtube LH

Start Date: 6/3/2010 Start Qty: 1.00

Required Date: 6/14/2010 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 Skidtubes	Skidtubes	0.00							
Skidtubes	Memo	0.00							
	LANDING GEAR RESOURCE 1								
	1-Weld crossbolt spacers D2909as per Dwg. D2904and QSI 004. For D2579 spacers, weld one side, pass Y" drill, weld other side, pass Y" drill A/R□□□ Aluminum Rod								
	2-Grind welds as per Dwg D2909								
	3-Install remaining rivets around X-Bolt spacer , use rivet shaver as necessary								
	4-Debur,inspect tube for any visible scratches								
170 QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00							

BE 10/07/14  
BE 10/07/19

Sid 10/19

(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 59392

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Item ID: D315-668-011

Accept



Setup

Start



Revision ID:

Item Name: Skidtube LH

Stop



Start Date: 6/3/2010 Start Qty: 1.00



Required Date: 6/14/2010 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

180

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Quality Control

Memo

0.00

*Solver 1/19*

*70*

190

Pressure Wash per QSI005 4.3

0.00



HandFinish

Hand Finishing

Memo

0.00

*1*

*BL 10-7-22*

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Powder Coating

Memo

0.00

POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

*1:35*

*320*

*2:05*

*1 BL 10-7-22*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Start Date: 6/3/2010 Start Qty: 1.00

Required Date: 6/14/2010 Req'd Qty: 1.00

Reference:

Accept



Setup

Start

Stop

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

210



QC

Quality Control

QC3- Inspect Part Finish

Memo

0.00

0.00

=7 M 10/07/27

1 0

220



HandFinish

Hand Finishing

HandFinishing

Memo

HAND FINISHING RESOURCE #1

0.00

0.00

=7 M 10/07/27

1 0

1-Install inserts & wearplates as per Dwg. D2904. Use a drop of Sikaflex on insert holes before installing wearplates

A/R ☐ ☐ Sikaflex-291 ☐ 11/11/14  
Sikaflex expire date: 11/10/14

3-Inspect for foreign object per QSI 024

4-Install 2646 Aft & fwd Caps as per Dwg D2904 and seal with Sikaflex. Clean excess adhesive

A/R ☐ ☐ Sikaflex-291 ☐ 11/11/14  
Sikaflex expire date: 11/10/14

5-Wing Walk as per Dwg D2904 and QSI 005

4.4

Batch: 11/10/14

POSITIVE RECALL

EFFECTIVE 10.06.09

AUTH CP

RELEASED

DATE 10.07.27



CHECK WEARPLATE FIT

WEARPLATE FIT IS  
GOOD. WEARPLATE NOT  
HITTING INTERFERING W/ WBS.

W/O:		WORK ORDER CHANGES					
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Reference:

Accept

Cust Item ID:

Customer:

Setup Start

Stop

Run Start

Stop

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230 QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00				(70)			
240 Packaging Packaging	Identify as per dwg & Stock Location: _____  Memo	0.00 0.00							
250 QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00 0.00							

REV A 10/7/20 SF

10/08/03

MF 10-8-03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

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Page 1

**Comments:** IPP Rev:A New Issue 07-04-12 JLM  
 IPP Rev:B remove seq. 19 (handfinish wing walk) 08-04-30 DD verified  
 by:EC

**Required Qty: 1.00**

Component Item ID/ D2904B	Replacement	Mfg/ Manufactured	Bin No	Primary	Last	Route 110	Unit of Each	Qty on 9.0000	Qty per Kit 1	Total 1	Qty	Date	Status
 Skidtube, 315													

LG

Loc Qty

**Loc Code**

D2910

Manufactured No

110 Each

## Doubler

**Location**

ST030

Loc Qty

**Loc Code**

D2911

Manufactured No

110 Each

## Doubler

**Location**

ST030

**Loc Qty**

**Loc Code**

MS27039-1-08

Purchased	No
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
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93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

110 Each

Screw

**Location**

ST291

**Loc Qty**

**Loc Code**

110552

1501

110835

1257

114718

200

W/O:		WORK ORDER CHANGES						
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

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Work Order ID: 59392

Parent Item: D315-668-011

Parent Item Name: Skidtube LH

Comments: IPP Rev:A New Issue 07-04-12 JLM  
IPP Rev:B remove seq. 19 (handfinish wing walk) 08-04-30 DD verified  
by:EC

Start Date: 6/3/2010

Required Date: 6/14/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
D2912		Manufactured	No			150	Each	22.0000	2	2			



Doubler

Location

Loc Qty

Loc Code

ST030 22  
36929 22

4,028.000 256 256

MS20601-AD4W3

Purchased

No

150 Each



Rivet

Location

Loc Qty

Loc Code

ST321 4000  
114538 4000  
ST322 28  
113899 28

2.0000 1 1

D2905

Manufactured

No

160 Each



Web, 315 Skidtube

Location

Loc Qty

Loc Code

LG 2  
57333 2

B59393

①

DP

10-7-13

Thursday, June 03, 2010 11:23:37 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Date: 6/3/2010

Required Date: 6/14/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
ALS4-1032-130		Purchased	No			220	Each	5,999.000	50	50			
Insert													

## Location

## Loc Qty

## Loc Code

PKG11

5000

114723

5000

ST282

390

110511

38

114407

352

ST381

609

114654

609

AN960JD10L

NAS1149D0332J

Purchased

No

220

Each

3,878.000

54

54



Washer

## Location

## Loc Qty

## Loc Code

ST348

3878

10985

3878

D2646

Manufactured

No

220

Each

109.0000

2

2



Aft Cap

## Location

## Loc Qty

## Loc Code

FP-4

99

57332

99

FP6

10

52663

10

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



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Page 4

Work Order ID: 59392

Parent Item: D315-668-011

Parent Item Name: Skidtube LH




Comments: IPP Rev:A New Issue 07-04-12 JLM  
IPP Rev:B remove seq. 19 (handfinish wing walk) 08-04-30 DD verified by:EC

Start Date: 6/3/2010

Required Date: 6/14/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
D2648-3		Manufactured	No			220	Each	13.0000	5	5			
													
Wearpad													
<div> <div>Location</div> <div>Loc Qty</div> <div>FG 12</div> <div>45316 12</div> <div>FP17 1</div> <div>52516 1</div> </div>													
D2656-13		Manufactured	No			220	Each	24.0000	1	1			
													
Wearplate													
<div> <div>Location</div> <div>Loc Qty</div> <div>FP020 12</div> <div>57354 12</div> <div>FP20 12</div> <div>55454 12</div> </div>													
D2656-33		Manufactured	No			220	Each	19.0000	1	1			
													
Wearplate													
<div> <div>Location</div> <div>Loc Qty</div> <div>MEZZ 19</div> <div>43806 6</div> <div>46167 13</div> </div>													

Loc Code

B 57516

XS M 10/07/27

Loc Code

Loc Code

Loc Code

XS M 10/07/27

XS M 10/07/27

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Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 5

Work Order ID: 59392

Parent Item: D315-668-011

Parent Item Name: Skidtube LH



Comments: IPP Rev:A New Issue 07-04-12 JLM  
IPP Rev:B remove seq. 19 (handfinish wing walk) 08-04-30 DD verified by:EC

Start Date: 6/3/2010

Required Date: 6/14/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
D2907  Wearshoe		Manufactured	No			220	Each	29.0000	1	1			
<div> <div> <u>Location</u>  FP  14654 </div> <div> <u>Loc Qty</u>  29  29 </div> <div> <u>Loc Code</u> </div> </div>													
D2909  Spacer, Lama		Manufactured	No			220	Each	30.0000	11	11			
<div> <div> <u>Location</u>  LG  14091 </div> <div> <u>Loc Qty</u>  30  30 </div> <div> <u>Loc Code</u> </div> </div>													

XI JM 10/04/27

11 86 10/07/14

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Page 5

W/O:		WORK ORDER CHANGES					
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**NOTE:** Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE USA, INC. BELLEVUE, WA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D2904	Rev. B SHEET 1 OF 3
DATE 00.06.21		TITLE SA 315B SKIDTUBE ASSEMBLY SCALE NTS	
A	99.09.09	NEW ISSUE	
B	00.06.21	CHANGED ANGLES FOR HOLES	

PARTS LIST:

Qty -041	Qty -042	Part Number	Description
X		D2904-041	LH SKIDTUBE ASSEMBLY
	X	D2904-042	RH SKIDTUBE ASSEMBLY
2	2	D2646	CAP
4	4	D2648-3	WEARPAD
1	1	D2648-5	WEARPAD
1	1	D2656-13	WEARSHOE
1	1	D2656-33	WEARSHOE
1		D2904-1	SKIDTUBE
	1	D2904-2	SKIDTUBE
1	1	D2905	WEB
1	1	D2907	WEARSHOE
11	11	D2909	CROSS BOLT SPACER
2	2	D2910	SKIDTUBE DOUBLER
2	2	D2911	SKIDTUBE DOUBLER
2	2	D2912	SKIDTUBE DOUBLER
50	50	ALS7-1032-130 or AKS4-1032-130 or ALS4-1032-130 or ALS7-1032-130	INSERT
54	54	AN960JD10L	WASHER
256	256	MS20601AD4W3	RIVET
54	54	MS27039-1-08	SCREW

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WORK ORDER  
NO. 59397

Part 10-6-03

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00.07.01 #

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**DART**

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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2904	Rev. B SHEET 2 OF 3
DATE 00.06.21		TITLE SA 315B SKIDTUBE ASSEMBLY	SCALE 1:20

**GENERAL NOTES:**

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. MAKE D2904-1 AND D2904-2 FROM D2914 EXTRUSION (INITIAL LENGTH = 142.0).
3. DAMAGE TOLERANCE ON BENDING:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. NO GOUGING IS ACCEPTABLE IN THE FLAT PORTION OF THE TUBE. GOUGES UP TO 0.020 ARE ACCEPTABLE IN THE BENT PORTION OF THE TUBE. TUBE O.D. SHOULD BE  $3.150 \pm 0.010$  IN THE FLAT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
4. ALL HOLES DRILLED ON CENTERLINES EXCEPT THOSE NOTED BY SECTION C-C.
5. DRILL #30 HOLES ( $\varnothing 0.128$  REF) TO LINE UP WITH  $\varnothing 0.128$  HOLES IN D2910/D2911/D2912 DOUBLERS. C'SINK  $\varnothing 0.239 \times 100^\circ$ .
6. BOND D2905 WEB INTO D2904-1 (OR D2904-2) OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
7. WELDING TO BE DONE PER DART QSI 004.
8. AFTER DRILLING, BENDING, AND INSTALLING WEB & DOUBLERS, PERFORM THE FOLLOWING FOR  $\varnothing 0.500$  HOLES ONLY:
  - CHAMFER HOLE  $0.050 \times 45^\circ$
  - INSERT D2909 SPACER (11 PLACES)
  - WELD INTO PLACE
  - GRIND FLUSH
  - DRILL OUT SPACER TO  $\varnothing 0.406$
9. FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
  - MINIMUM YIELD TENSILE STRENGTH = 35 ksi
  - MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
10. FINISH:
  - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2905 WEB AND D2910/D2911/D2912 DOUBLERS.
  - POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
  - BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
11. DRILL  $\varnothing 0.297$  FOR ALS7-1032-130 INSERT USING DT8395 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH.

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00.09.01 *[Signature]*

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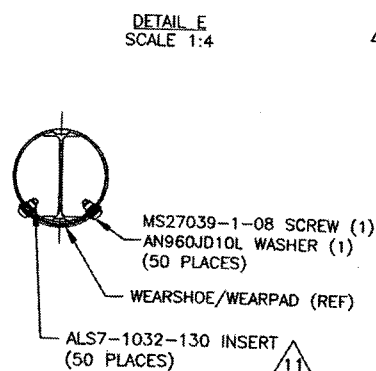
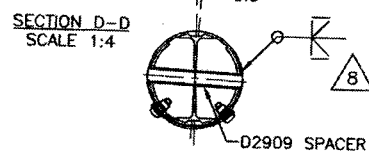
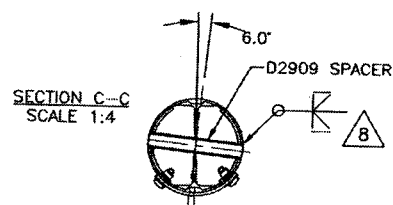
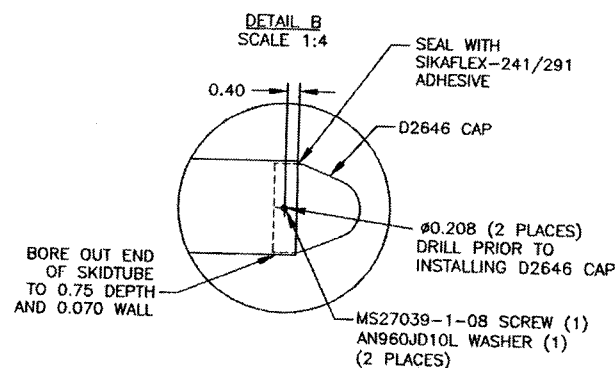
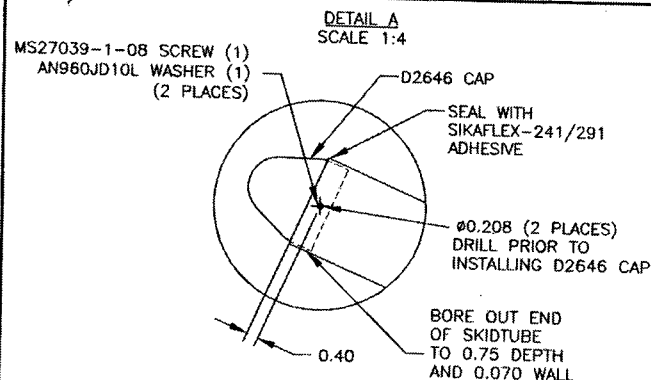
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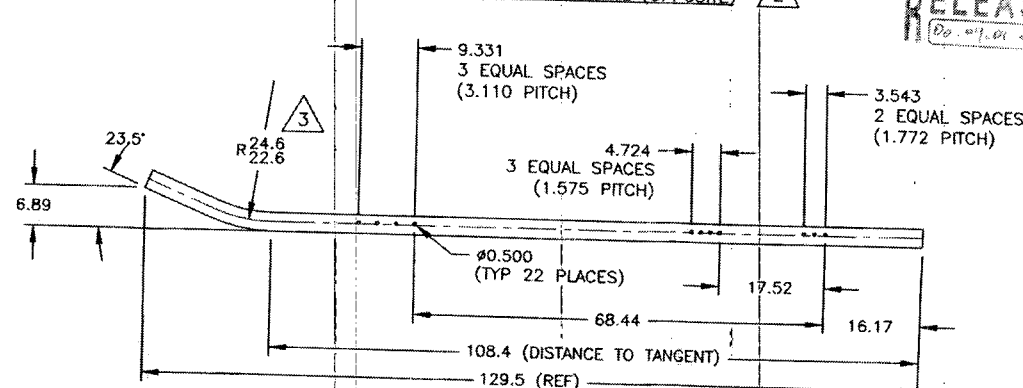
**NOTE:** Date & initial all entries



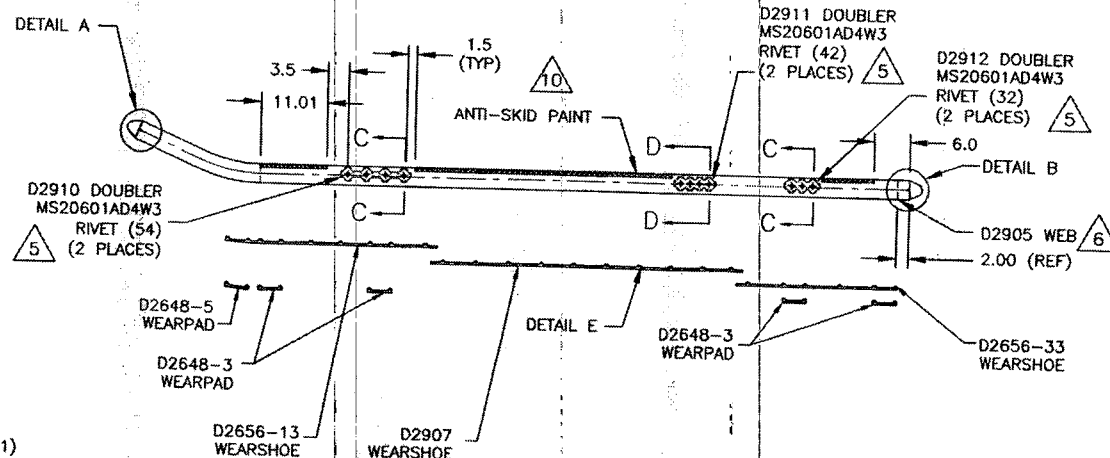
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D2904-1 BENDING/DRILLING DETAIL (SHOWN)  
D2904-2 BENDING/DRILLING DETAIL (OPPOSITE)



D2904-041 LH ASSEMBLY DETAIL (SHOWN)  
D2904-042 RH ASSEMBLY (OPPOSITE)



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		DATE		TITLE SA 315B SKIDTUBE ASSEMBLY	SCALE 1:20
		00.06.21			

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NO. 231

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 57326  
Part number: D315 668 012  
Description: Lame tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminium  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Pat. Dunt Date of Test Coupon 10.05.18

Welder Barclay Elliott Date of Test Coupon 10.05.18

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

